

wherein the barrel portion has an outer diameter taper along at least a portion of its length and the liner has a substantially matching internal diameter taper along at least a portion of its length.

13. (New) The engine block mold as set forth in claim 12, wherein the taper of the cylinder liner and the taper of the barrel portion extends along substantially the entire length of each.

14. New) The engine block mold as set forth in claim 12, wherein the barrel core is integral with a crankcase core.

15. (New) A method of assembling the engine block mold set forth in claim 12, said method comprising the steps of:
disposing the cylinder liner on the barrel portion;
inserting the slab barrel core and the liner disposed thereon into a mold casing.

16. (New) A method as set forth in claim 15, wherein the disposing step and/or the inserting step is accomplished via manipulation means.

17. (New) A method as set forth in claim 16, wherein the manipulation means are robots.

18. (New) A method as set forth in claim 15, further comprising the step of preparing the cylinder liner.

19. (New) A method as set forth in claim 18, wherein the step of preparing the cylinder liner includes cleaning and preheating the cylinder liner.

20. (New) A method as set forth in claim 19, wherein the cleaning and heating of the cylinder liner is achieved simultaneously using a fluidized sand bed.

21. (New) A method of casting an engine block with the engine block mold set forth in claim 12, said method comprising the steps of:

assembling the engine block mold;
pouring molten metal into the mold to cast an engine block; and
removing the cast engine block from the mold.

22. (New) A method as set forth in claim 21, further comprising the steps of machining the cylinder liners so that they have a substantially constant internal diameter along their length.

23. (New) An engine block mold as set forth in claim 12, comprising a plurality of the barrel slab cores and a corresponding plurality of the cylinder bore liners;
wherein the barrel portion of each barrel slab core is adapted to receive the corresponding cylinder liner;

wherein each barrel portion has an outer diameter taper along at least a portion of its length and each corresponding cylinder liner has a substantially matching internal diameter taper along at least a portion of its length.

24. (New) The engine block mold as set forth in claim 23, wherein the taper of each barrel portion extends along substantially its entire length and wherein the taper of the corresponding cylinder liner extends substantially its entire length.

25. (New) The engine block mold as set forth in claim 23, wherein the plurality of barrel cores are integral with a crankcase core.

26. (New) A method of assembling the engine block mold set forth in claim 23, said method comprising the steps of:

disposing the corresponding cylinder liner on each barrel portion;
inserting the slab barrel cores and the liners disposed thereon into a mold casing.

27. (New) A method as set forth in claim 26, wherein the disposing step and/or the inserting step is accomplished via robots.

28. (New) A method as set forth in claim 23, further comprising the step of preparing the cylinder liners.

29. (New) A method as set forth in claim 28, wherein the step of preparing the cylinder liners includes cleaning and preheating the cylinder liners.

30. (New) A method as set forth in claim 29, wherein the cleaning and heating of the cylinder liners is achieved simultaneously using a fluidized sand bed.

31. (New) A method of casting an engine block with the engine block mold set forth in claim 23, said method comprising the steps of:

assembling the engine block mold;

pouring molten metal into the mold to cast an engine block; and

removing the cast engine block from the mold.

32. (New) A method as set forth in claim 31, further comprising the steps of machining the cylinder liners so that they have a substantially constant internal diameter along their length.

Respectfully submitted,

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